The magnitude of the correction ...

through a phasing quadripole. Such an antenna system enables one of the magneto-ionic components to be weakened by approximately 10-fold. The duration of measuring is 10 min., the form of the recording being a card plot at the rate of 1 card every 4 sec. Analysis showed that there is no substantial difference between the two methods of processing. [Abstractor's note: Complete translation].

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S/165/61/000/001/001/007
A104/A127

7.7100

AUTHOR: Shirmamedov, M.

TITLE: Determination of the curvature radius of rippled ionosphere

PERIODICAL: Akademiya nauk Turkmenskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh, khimicheskikh i geologicheskikh nauk, no. 1, 1961, 13 - 18

TEXT: The author, in cooperation with Professor V.K. Kessenikh, and Corresponding Member of the Academy of Sciences TSSR, N.M. Yerofeyev, investigates the method of determining the curvature radius of the rippled ionosphere and the true value of the reflection coefficient taking into account the focusing factor, recommended by K. Rawer [Ref. 8: "Sur la détermination du nombre de choce relatif a la region F_2 de l'ionosphere Del Nuovo Cimento", v. 4, no. 4, 1956, and Ref. 9: "Focusing on a "rippled ionosphere", Journal of Atmospheric and Terrestrial Physics, v. 9, 1956]. Experiments were performed during the night when [illegible]1 is most frequent. During 10 min observation periods photographs were taken from screen to oscillograph with a type S scanner every 4 sec. To avoid the interference effect between ordinary and extraordinary components, observation frequencies had to be clearly discernible and at a safe distance from f_0F_2.

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Determination of the curvature radius ...

The extraordinary component was transmitted by a polarization antenna (1:10). E. Argence and K. Rawen (Ref. 8) obtain Equation (1) derived by the geometrical method taking into account the focusing factor used by K. Rawer for the calculation of the reflection coefficient;

$$E_1 = \frac{E_0 \rho}{2H\left(1-\frac{H}{r}\right)},$$

$$E_2 = \frac{E_0 \rho^2 \rho_{\text{earth}}}{4H\left(1-\frac{H}{r}\right)\left(1-2\frac{H}{r}\right)}, \qquad (1)$$

$$E_3 = \frac{E_0 \rho^3 \rho^2_{\text{earth}}}{6H\left(1-\frac{H}{r}\right)\left(1-\frac{4}{3}\frac{H}{r}\right)\left(1-4\frac{H}{r}\right)},$$

E_1, E_2 and E_3 - respective field intensity of the single, double and triple reflected wave; E_0 - field intensity of the incident wave; ρ - ionosphere reflection coefficient; ρ_{earth} - earth reflection coefficient ($\rho_{\text{earth}} = 1$); H -

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Determination of the curvature radius ...

effective altitude of the reflecting layer; r - curvature radius of the rippled layer. Subsequent determination of the curvature radius of the reflecting surface and true values of the reflection coefficient is based on Eq. (1). The correlation of E_2 to E_1 produces

$$\frac{E_2}{E_1} = \frac{}{2\left(1 - 2\frac{H}{r}\right)} \qquad (2)$$

but here - is the absolute true value of the reflection coefficient, which is subsequently designated $\left|\rho_{true}\right|$, whereas the correlation $\frac{2E_2}{E_1} = \rho_{21}$ - observed reflection coefficient, thus transforming Eq. (2)

$$\left|\rho_{true}\right| = \frac{2E_2}{E_1}\left(1 - 2\frac{H}{r}\right) = \rho_{21}\left(1 - 2\frac{H}{r}\right) \qquad (3)$$

In the same way the correlation of E_3 to E_1 provides another expression for the true value ρ, i.e. $\rho_{31} = \left|\frac{3E_3}{E_1}\right.$

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$$\rho^2_{true} = \rho^2_{31}\left(1 - \frac{4}{3}\frac{H}{r}\right)\left(1 - 4\frac{H}{r}\right) \quad (4)$$

and the correlation of E_3 to E_2

$$\rho_{true} = \rho_{32}\frac{\left(1 - \frac{4}{3}\frac{H}{r}\right)\left(1 - 4\frac{H}{r}\right)}{1 - \frac{2H}{r}} \quad (5)$$

i.e. $\rho_{32} = \frac{3E_3}{2E_2}$. Thus three expressions in respect of ρ_{true} are obtained by correlations of various amplitudes. The determination of the curvature radius, based on Eqs. (3) and (4), can be expressed by:

$$r_{1,2} = \frac{2H}{3(\rho^2_{21} - \rho^2_{31})}\left[3\rho^2_{21} - 4\rho^2_{31} \pm \sqrt{\rho^2_{31}(4\rho^2_{31} - 3\rho^2_{21})}\right] \quad (6)$$

based on Eqs. (3) and (5) by:

$$r_{1,2} = \frac{2H}{3(\rho_{21} - \rho_{32})}\left[3\rho_{21} - 4\rho_{32} \pm \sqrt{\rho_{32}(4\rho_{32} - 3\rho_{21})}\right], \quad (7)$$

and based on Eqs. (4) and (5) by

$$r_{1,2} = \frac{2H}{3(\rho^2_{31} - \rho^2_{32})}\left[3\rho^2_{31} - 4\rho^2_{32} \pm \sqrt{\rho^2_{32}(4\rho^2_{32} - 3\rho^2_{31})}\right]. \quad (8)$$

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The latter three equations are effective only if there is a plus sign preceeding the root. The applicability of these equations was checked on 3,000 photographs. Amplitude values were determined either according to their arithmetic mean or median values, as shown in a table, the difference is negligible. It was established that Eqs (6), (7) and (8) are applicable to four measurements only. In 80% of cases they produce imaginary values as to ρ_{21}, ρ_{31} and ρ_{32}. True values of the reflection coefficient can be obtained by the value of the curvature radius and any of Eqs. (3), (4) and (5). The value of the curvature radius and true values of the reflection coefficient obtained by the authors of this paper are shown in another table. According to Eqs. (3), (4) and (5) there are three possibilities:

if $r = H$, then $|\rho_{true}| = \rho_{observed}$

if $r > H$, then $|\rho_{true}| < \rho_{observed}$, and

if $r < H$, then $|\rho_{true}| > \rho_{observed}$.

It is considered remarkable that these three equations produce similar and occasionally even identical true values of the reflection coefficient. However, calculations based on Eqs. (6), (7) and (8) do not provide reliable data on all

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observations, chiefly because they presuppose constant values of the curvature radius, which is rarely met in practice. E. Argence and K. Rawer (Ref. 8) express the reflecting surface by

$$z = z_0 + \Delta \cos \frac{2\pi x}{\lambda} \qquad (9)$$

z - effective altitude of the layer; Δ - amplitude; λ - wave length of the presumed "ripple". By applying the already known expression of the curvature radius

$$r = \frac{\left[1 + \left(\frac{\partial z}{\partial x}\right)^2\right]^{3/2}}{\frac{\partial^2 z}{\partial x^2}}$$

and Eq. (9), the value r becomes expressed:

$$r = \frac{\left(1 + \frac{4\pi^2\Delta^2}{\lambda^2} \sin^2 \frac{2\pi x}{\lambda}\right)^{3/2}}{-\frac{4\pi^2\Delta}{\lambda^2} \cos \frac{2\pi x}{\lambda}}, \qquad (10)$$

r - curvature radius Δ - amplitude; λ length of ripple. Limit values of Δ = 100 m and λ = 100 km were determined according to the method of E. Argence

Determination of the curvature radius ...

and K. Rawer (Ref. 8) at given value x from 0 to 100 km. The values obtained vary as follows: x = 0 applies to curvature radius r = -2,535 km; later value r increases gradually to x and at x = 25 km becomes infinite. A further increase of x leads to a decrease of r, reaching a minimum at x = 50 km (r = 2,535 concave surface). Above x = 50 km value r increases again and becomes infinite at x = 75 km. The center of the non-homogeneous curvature radius shifts in horizontal direction in accordance with the movement of the latter, as recorded by G.H. Munro [Ref. 10: "Reflections from irregularities in the ionosphere", Proc. Roy. Sov. A., v. 219, 1953]. The following conclusions were drawn: Reflection conditions vary considerably with time due to movements in the ionosphere. As the formula proposed by K. Rawer does not take into account this fact nor properly reflects the effect of focusing, it cannot be recommended for use in the further, thorough investigation of this problem. There are 2 tables and 10 references: 7 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: Rawer, K., "Focusing on a "rippled" ionosphere", Journal of Atmospheric and Terrestrial Physics, v.9, 1956; G.H. Munro "Reflections from irregularities in the ionosphere". Proc. Roy. Soc. A. v.219, 1953.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN Turkmenskoy SSR (Physical-Technical Institute of the Academy of Sciences Turkmenskaya SSR)

SUBMITTED: May 18, 1960

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SHIMANOVICH, M., ALLABERDYYEV, D.

Number of electron collisions in the ionospheric D layer. Izv. AN Turk. SSR.Ser. fiz.-tekh., khim. i geol.nauk no.6:20-22 '63. (MIRA 18:1)

1. Fiziko-tekhnicheskiy institut AN Turkmenskoy SSR.

SHIRMAMEDOV, M.

Anomalous values of the reflection coefficient. Geomag. i aer. 3 no.5:922-928 S-O '63. (MIRA 16:11)

1. Fiziko-tekhnicheskiy institut AN Turkmenskoy SSR.

L 10492-65 ENT(l)/EWG(v)/FCC/EEC-4/EEC(t)/EWA(h) Po-4/Pe-5/Pq-4/Pae-
Peb/Pi-4 AFTC(b)/ESD(c)/ESD(gs) RB/GW/WS

ACCESSION NR: AP4040715 S/0203/64/004/003/0594/0598

AUTHOR: Shirmamedov, M.

TITLE: Synchronous observations on anomalous values of the coefficient of reflection from the F2 zone of the ionosphere at spaced receiving antennas

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 3, 1964, 594-598

TOPIC TAGS: reflection coefficient, ionosphere, F2 zone, receiving antenna, vertical atmospheric sounding

ABSTRACT: This work is based on measurements made at Ashkhabad in October and November of 1962 by vertical sounding. Signals were received at two points 5000 m apart. In February and March of 1963 signals were obtained at three antennas situated at the apices of a right triangle, 100 m on each leg. Two hundred observations of 234 actually made were considered usable. Anomalous values of the coefficient of reflection (ρ) as a result of focusing were observed simultaneously at both distances (100 and 5000 m). The coefficient of reflection continued at $\rho > 1$, in individual cases, for 30 min (for observers at both distances). At the same time the height of the F2 layer was observed to change smoothly by 5-40 km. This fact confirms the view of several investigators that the inclination of the reflection surface causes the focusing effect. The effect is clearest when $\rho > 1$ changes to $\rho \ll 1$ with a change in the effective height of the F2 layer. A value

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ACCESSION NR: AP4040715

of $\rho > 1$ was observed at single points 5000 m apart and also at one or two antennas 100 m apart, but when this was so defocusing of $\rho \ll 1$ was absent. At night $\rho \ll 1$ indicates the presence of great absorption in the ionosphere, and the apparent weakening of the signal reaches 10-20 decibels, at times as much as 20-39 decibels. No disturbance has been observed in the ionosphere at this time, and this indicates that the weakening is the result of deformation of the reflected signal. Computations of the reflection coefficient at 5-min interval indicates small-scale inhomogeneities and a slope of the F2 layer. If the values of ρ obtained at the two 5000-meter points or at the 3 antennas agree among themselves (except when $\rho > 1$ and $\rho \ll 1$), then deviations in time may amount to 11%, which is practically perfect equivalence. "The author considers it his pleasant duty to express his sincere thanks to N. M. Yerofeyev for setting up the problem, to V. N. Kessenikh for reading the manuscript and for valuable remarks, and also to D. Allaberdiyev, E. Atanesova, A. Babayev, and A. A. Smirnova for their aid in working up the material."
Orig. art. has: 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN TurkmSSR (Physico-technical Institute AN TurkmSSR)

SUBMITTED: 29Aug63 ATD PRESS: 23Jul64 ENCL: 00
SUB CODE: ES, GP NO REF SOV: 009 OTHER: 005
Card 2/2

EWT(d)/EWT(l)/EEC(k)-2/EWG(v)/FCC/EEC-4/EEC(t)/EWA(h) Pe-5/Pg-4/
Pt-7/Pae-2/Peo RB/WW/WS-4

ACCESSION NR: AT5009250 UR/2831/64/000/013/0089/0096

AUTHOR: Shirmamedov, M.

TITLE: Characteristics of the absorption of radio waves in vertical sounding of the ionosphere over Ashkhabad

SOURCE: AN SSSR. Mezhduvedomstvennyy geofizicheskiy komitet. V razdel programmy MGG: Ionosfera. Sbornik statey, no. 13, 1964, 89-96

TOPIC TAGS: radio wave propagation, radiation absorption, ionospheric sounding, vertical sounding, solar activity, ionospheric F layer, ionospheric E layer

ABSTRACT: The article covers absorption measurements made between 1954 and 1960 at the Ionosferno-volnovaya laboratoriya Fiziko-tekhnicheskogo instituta AN Turkm. SSR (Ionospheric Wave Laboratory of the Physicotechnical Institute, AN Turkmen SSR). The apparatus consisted of a powerful pulse transmitter, receiver, and photorecorder. The diurnal and seasonal variations of the absorption coefficient, which follow the changes in the zenith angle of the sun, reach maximum values at about 12 o'clock local time and in the summer months (June-August). Minimum values are observed during night hours. In 1958, the absorption was 4.2

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ACCESSION NR: AT5009250

times that of 1954. During years of minimum solar activity (1954) in summer, the absorption was 5 times as great as in winter. The summer and winter absorption became about equal in 1958, the year of maximum solar activity. The absorption was found to be inversely proportional to the square of the freqeuncy f_{min} during a chromospheric flare. The reflection coefficients of the F_2 and E_s layers were measured, and the role of focusing and defocusing of the signals reflected from the inhomogeneous surface of the ionosphere is taken into account. Orig. art. has: 1 figure, 4 tables, and 2 formulas.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 010 OTHER: 004

Card 2/2

USSR/Radio - Oscillators Aug 49
Vacuum Tubes, Kinescope

"A Sweep Oscillator," A. Klopov, A. Shirman, 1 p

"Radio" No 8

Describes new H sweep oscillator embodying certain featur s lacking in previous models. Generates 5-6 kv without difficulty--capable of supplying 8-10 kv for 12-inch television tubes (Kinescope) with less power consumption than necessary for a 6-kv saw-tooth generator.

PA 66/49T104

VIGDORCHIK, D.Ya.; SHIRMAN, A.D.

Improvement of RD-32 and RD-50 pressure regulators. Gaz.prom. 5 no.9:28-31 S '60. (MIRA 13:8)
(Gas distribution) (Pressure regulators)

SOV/137-57-6-9588

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 6, p 39 (USSR)

AUTHOR: Shirman, A.D.

TITLE: Automating the Operation of Blast-furnace Car Scales (Avtomatizatsiya raboty vagon-vesov domennykh pechey)

PERIODICAL: Tr. Nauch.-tekhn. o-va chernoy metallurgii, 1956, Vol 8, pp 455-462

ABSTRACT: A description is offered of steps taken at the Novo-Tagil'skiy Metallurgical Plant [at Nizhniy Tagil; Transl. Ed. Note]. The charge-equipment automation controls, installed in the gas watchman's cabin, consist of a panel with special plug-in switchboards on which the furnace foreman programs the charge. Before the start of loading, voltage is delivered to the contact device and to the signal lights of the group of bins from which the material is to be loaded. The weight of the material proportioned is controlled by a device in the weighing head. Actions by the operator are automatically blocked if they are not provided for in the program. At the Kuznetsk Metallurgical Kombinat, the programming panel and the entire automated control apparatus are located directly on the car

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Automating the Operation of Blast-furnace Car Scales

scales, connection between the latter and the bunkers being carried out by lever-type track disconnects. The installation of the entire automation apparatus on the car scales is also provided in the new design of model ES-30 (30-t lifting capacity) manufactured by the Odessa plant im. Starostin. Information is presented on a plan for the automation not only for the proportioning and weighing of the charge, but for the moving of the car scales.

L.S.

DEPUTATOVA, N.F.; STAROSEL'SKAYA, I.M.; SHIRMAN, A.G.; BOGUSLAVSKIY, B.L., professor, redaktor; MANOLE, M.G., redaktor; BRUDNO, K.F., tekhnicheskiy redaktor

[German-Russian metallurgical dictionary] Nemetsko-russkii slovar' po metalloobrabotke. Pod red. B.L.Boguslavskogo. Moskva, Gos. izd-vo tekhn.-teoret.lit-ry, 1957. 465 p. (MLRA 10:10)
(Metallurgy--Dictionaries)
(German language--Dictionaries--Russian)

LEVINA, Z.I.; SHIRMAN, A.G.; GUBKINA, Ye., red.; VAYSMAN, M., izd.red.; GOL'DFEL'D, Ya., tekhn.red.

[Principles of machine manufacturing] Osnovy mashinostroeniia. Podbor tekstov, sost. uprazhnenii, kommentariia i slovaria Z.I. Levinoi i A.G.Shirman. Moskva, Izd-vo lit-ry na inostr. iazykakh, 1958. 134 p. [Text in German with German-Russian dictionary.]
(Machinery) (MIRA 12:1)

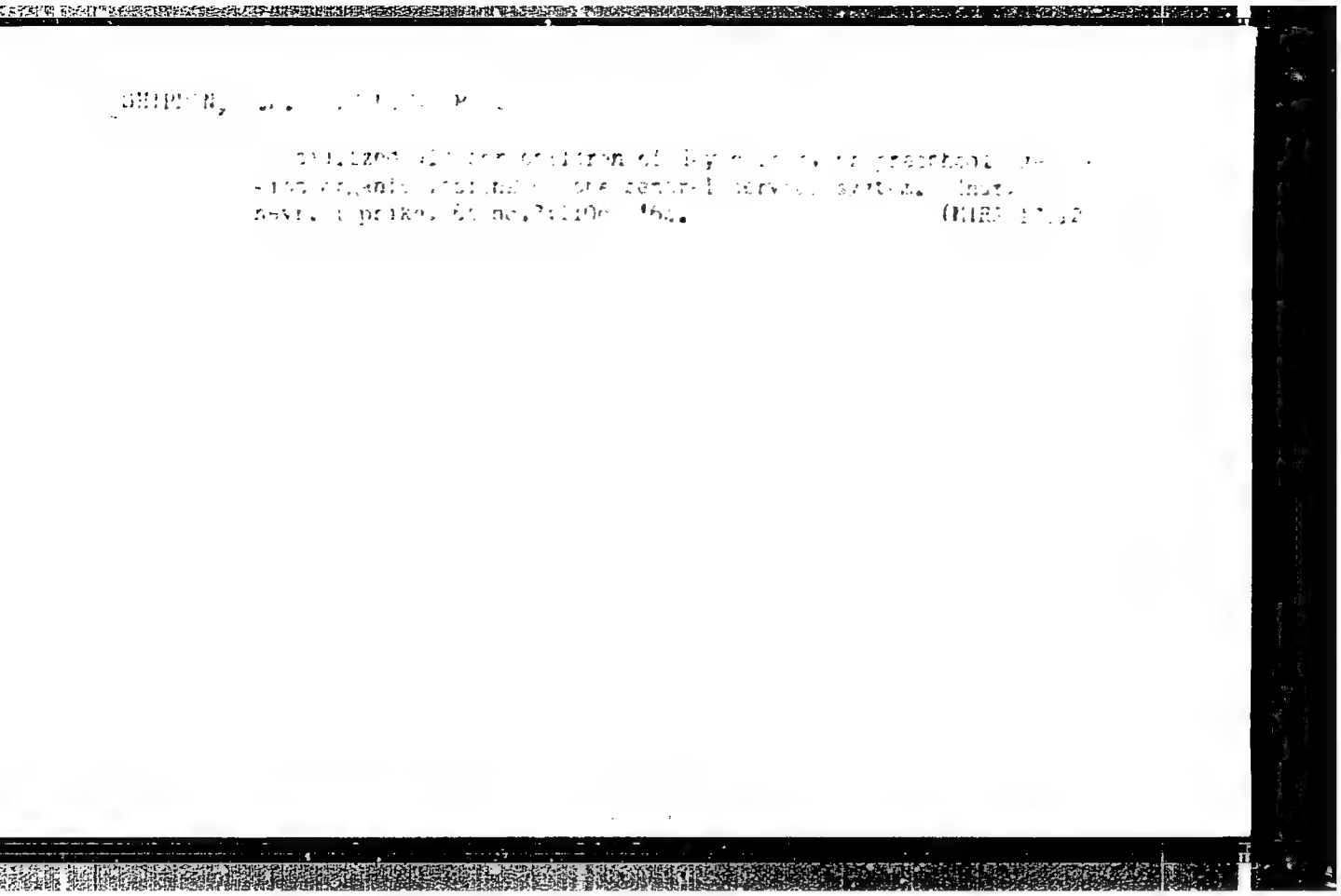
GRINSHTEYN, Ya. G.; DAVIDOVICH, V.S.; SHIRMAN, A.M.

New conveyer for assembling watches. Priborostroenie no.5:17-19 My '61. (MIRA 14:5)
(Clockmaking and watchmaking)
(Assembly line methods)

DINERSHTEYN, L.V.; SOKOLOVA, A.P.; SHIRMAN, A.M.

Problem of late sequelae following a craniocerebral trauma in early childhood. Zhur. nevr. i psikh. 64 no.7:1058-1064 '64. (MIRA 17:12)

1. Otdel patomorfologii tsentral'noy nervnoy sistemy (zaveduyushchiy- kand. med. nauk A.P. Sokolova, nauchnyy konsul'tant - prof. A.P. Avtsyn) Nauchno-issledovatel'skogo instituta psikhiatrii (direktor - prof. D.D. Fedotov) Ministerstva zdravookhraneniya RSFSR, Moskva.



KHMELEVSKIY, A.V., inzhener; SHIRMAN, A.N., inzhener, redaktor.

[Locomotives; equipment and operation] Parovozy; ustroistvo i obsluzhivanie. Moskva, Gos. transp. zhel-dor. izd-vo, 1954. 439 p. (MLRA 7:8)
(Locomotives)

SHIRMAN,A.N., inzhener; BLIZNYANSKIY,A.S.

New standard for locomotive piston rings. Standartizatsiia no.2:51-54 Mr-Ap '55. (MLRA 8:6)

1. Ministerstvo putey soobshcheniya
(Piston rings--Standards)

KUTSKEVICH, I.I., inzhener; SHIRMAN, A.N., inzhener.

Improving the design of piston riggs for locomotives. Zhel.dor. transp. 37 no.1:77-79 Ja '56. (MLRA 9:3)
(Locomotives) (Piston rings)

PATLYKH, Nikolay Ivanovich; SHIRMAN, A.N., inzh., red.; BOBROVA, Ye.N., tekhn. red.

[Improved steam distribution mechanism for locomotives] Uluchshennyi paroraspredilitel'nyi mekhanizm parovozov. Moskva, Gos. transp. zhel-dor. izd-vo, 1958. 38 p. (MIRA 11:7)
(Locomotives)

SHIRMAN, A.N.

Mobile unit for servicing diesel locomotives. Biul.tekn.-ekon. inform. no.6:67-69 '58. (MIRA 11:8)
(Diesel locomotives)

SHIRMAN, A.M.

Locomotives with composite fuel systems. Biul. tekhn.-ekon. inform. no.8:73-74 '58. (MIRA 11:10)
(Locomotives)

SHIRMAN, A.N.

The TEM1-type switching diesel locomotive. Biul.tekh.-ekon. inform. no.12:60-62 '58. (MIRA 11:12)
(Diesel locomotives)

SHIRMAN, A.N., inzh.

Additional device in the circuit of the ZhR-3 radio set.
Elek.i tepl.tiaga 3 no.8:31 Ag '59. (MIRA 12:12)
(Railroads--Electronic equipment)

SHIRMAN, A.N., inzh.

Improved closing device for sand-distributing hoses. Elek.i tepl.tiaga 3 no.10:19 O '59. (MIRA 13:2)
(Electric locomotives--Equipment and supplies)

SHIRMAN, A.N.

Device for lubricating tire flanges of locomotives. Biul. tekh.-ekon. inform. no.10:68-70 '59. (MIRA 13:3)
(Locomotives--Lubrication)

SHIRMAN, A.N.

The ER-6 electric train. Biul.tekh.-ekon.inform. no.12:60-61 '59. (MIRA 13:4)
(Electric railroads--Cars)

SHIRMAN, A.N., inzh.

Mobile stations for servicing diesel locomotives. Zhel.dor. transp. 41 no.7:93-94 Jl '59. (MIRA 12:12)
(Diesel locomotives--Maintenance and repairs)

SHIRMAN, A.N., vedushchiy konstruktor

Distributing columns for diesel locomotives. Elek. i tepl. tiaga 4 no.5:24-25 My '60. (MIRA 13:7)

1. Vedushchiy konstruktor Proyektno-konstruktorskogo byuro Glavnogo upravleniya lokomotivnogo khozyaystva Ministerstva putey soobshcheniya.
(Diesel locomotive--Fuel systems) (Fuel pumps)

SHIRMAN, A.N.

Mechanized drive for the doors of a railroad repair shop. Elek. i tepl. tiaga 4 no.11:23 N '60. (MIRA 13:12)

1. Vedushchiy konstruktor Proyektnokonstruktorskogo byuro Glavnogo upravleniya lokomotivnogo khozyaystva Ministerstva putey soobshcheniya.
(Railroads--Repair shops) (Electric driving)

SHIRMAN, A.N., inzh.

Automatic pressure proportioner for water softening installations.
Energetik 8 no.2:8-9 F '60. (MIRA 13:6)
(Water--Softening)

CHERNOKHVOSTOVA, Ye.V.; AL'TSHTEYN, A.D.; SHIRMAN, G.A.

Disintoxicating effect of levomycin and synthomycin [with summary in English]. Antibiotiki 2 no.6:45-49 N-D '57. (MIRA 11:2)

1. Kafedra mikrobiologii (zav. - prof. M.N.Lebedeva) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.
(CHLORAMPHENICOL, effects,
on Salmonella paratyphis toxin in vitro (Rus))
(SALMONELLA PARATYPHI,
toxin, eff. of chloramphenicol (Rus))

CHUMAKOV, M.P.; VOROSHILOVA, M.K.; VASIL'YEVA, K.A.; BAKINA, M.N.; DROZDOV, S.G.; PODSEDLOVSKIY, T.S.; KOSTINA, K.A.; SHIRMAN, G.A.; YANKEVICH, O.D.; USPENSKIY, Yu.S.; ASHMARINA, Ye.Ye.

Preliminary report on massive peroral immunization of the population against poliomyelitis with live virus vaccine from attenuated Sabin strains. Vop.virus. 4 no.5:520-533 S-O '59. (MIRA 13:2)

1. Institut po izucheniyu poliomiyelita AMN SSSR, Moskva.
(POLIOMYELITIS, immunol.)

DROZDOV, S. G.; SHIRMAN, G. A.; technical assistance: KNYAZEVA, T. V.

Interaction of viruses in the intestinal tract of man. I. Interference between wild and vaccine poliovirus strains. Acta virol.Engl.Ed.Praha 5 no.4:210-219 Jl '61.

1. Institute of Poliomyelitis Research, U.S.S.R. Academy of Medical Sciences, Moscow.

(POLIOMYELITIS immunol)

SHIRMAN, G. A.

Interaction of viruses in the intestinal tract of man. II. Interference between poliovirus vaccine strains. Acta virol.Engl.Ed.Praha 5 no.6:359-366 N '61.

1. Institute of Poliomyelitis Research, U.S.S.R. Academy of Medical Sciences, Moscow.

(POLIOMYELITIS VIRUSES)
(GASTROINTESTINAL SYSTEM virol)

CHUMAKOV, M.P.; VOROSHILOVA, M.K.; DROZDOV, S.G.; DZAGUROV, S.G.; LASHKEVICH, V.A.; MIRONOVA, L.L.; NAL'F, N.N.; GAGARINA, A.V.; DOBROVA, I.N.; ASHKARINA, Ye.Ye.; ZHIRNAN, G.A.; FLEYER, G.P.; TOL'SKAYA, Ye.A.; SOKOLOVA, I.S.; EL'BERT, L.B. (Moskva); SINYAK, K.M. (L'vov)

Some results of the work in mass immunization of the population of the Soviet Union against poliomyelitis with live vaccine from Sabin strains. Vest. AMN SSSR 16 no.4:39-43 '61. (MIRA 15:5)

1. Iz Instituta poliomyelita i virusnykh entsefalitov AMN SSSR.
(POLIOMYELITIS VACCINE) (POLIOMYELITIS--PREVENTION)

ALTSTEIN, A.D.; KAZANTSEVA, V.A.; SHIRMAN, G.A.

Interference between tick-borne encephalitis and poliomyelitis viruses in tissue culture. I. Resistance of tick-borne encephalitis virus-infected cells to the cytopathic effect of poliovirus. Acta virol. Engl. Ed. Praha 6 no.5:421-427 S '62.

1. Institute of Poliomyelitis and Viral Encephalitides, U.S.S.R. Academy of Medical Sciences, Moscow.
(ENCEPHALITIS, EPIDEMIC virol.) (POLIOMYELITIS VIRUSES immunol.)

AGOL, V.I.; SHIRMAN, G.A.

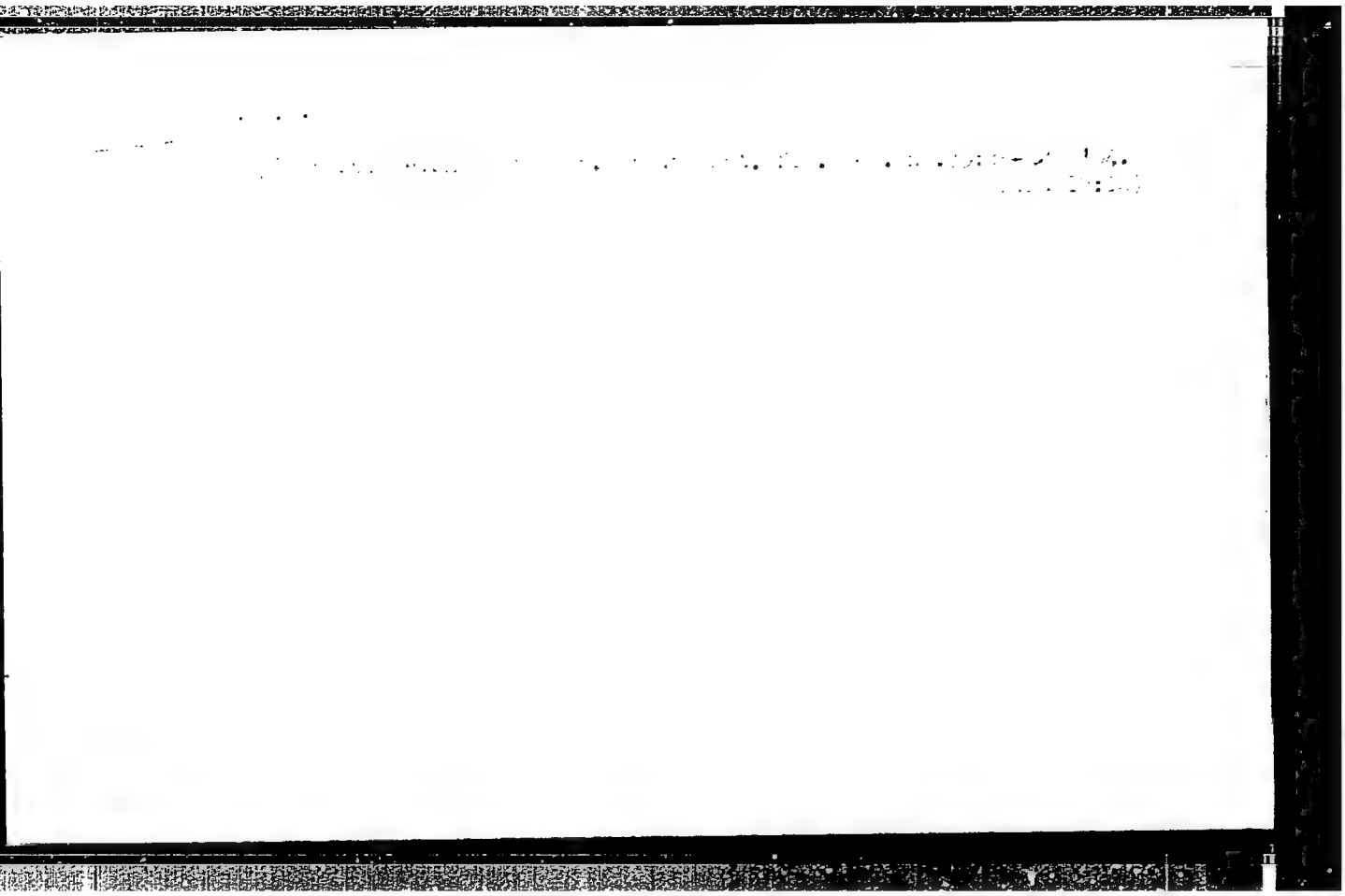
Formation of virus particles on the account of enzyme systems and structural proteins induced by another "helper" virus. Vop. virus. 10 no.1:8-13 Ja-F '65. (MIRA 18:5)

1. Institut poliomiyelita i virusnykh entsefalitov AMN SSSR i kafedra virusologii Moskovskogo universiteta.

DROZDOV, S.G.; ZDANOVSKIY, I.I.; SHIRMAN, G.A.

Device for tissue culture in the air with 5% of carbon dioxide.
Vop. virus. 9 no.6:723-725 N-D '64. (MIRA 18:11)

1. Institut poliomiyelita i virusnykh entsefalitov AMN SSSR, Moskva.



EMINOV, Ye.A., redaktor; SHIRMAN, I.B., redaktor.

[Technical specifications for petroleum products] Tekhnicheskie normy na nefteprodukty. Izd. 13-oe, perer. i dop. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, 1951. 403 p. [Photostat] (MLRA 8:2)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniyepo sbytu nefti. (Petroleum products)

SHIRMAN, N. (Kiyev)

Simple methods for editing films. Sov. foto 19 no.5:67-70 My '59. (MIRA 12:9)
(Motion pictures--Editing)

SHIRMAN, N., operator

Equipment for amateur motion-picture photographers. Tekh.kino i telev. 4 no.4:71-72 Ap '60. (MIRA 13:9)

1. Kiyevskaya studiya nauchno-populyarnykh fil'mov.
(Amateur motion pictures--Equipment and supplies)

SHIRMAN, S.I.; BAKULIN, S.B.

"Little waste and waste-free sheet-metal work" by V.A. Volosatov.
Kuz.-shtam. proizv. 4 no.7:46-47 Jl '62. (MIRA 15:7)
(Sheet-metal work)
(Volosatov, V.A.)

STABIN, I.P.; SHIRMAN, V.G.

New technological processes for obtaining dressed rubble of local raw materials. Za indus.Riaz. no.2:47-48 D '61. (MIRA 16:10)

SHIRMAN, V.G., inzh.; STABIN, I.P., inzh.

Drum separators for dressing crushed stone in heavy mediums.
Stroi. mat. 8 no.4:11-15 Ap 62. (MIRA 15:8)
(Stone, Crushed) (Separators (Machines))

STABIN, I.P., inzh.; SHIRMAN, V.G., inzh.

Dressing fine aggregates in a hydroseparator. Stroi. mat. 9 no.2:10-13 F '63. (MIRA 16:2)
(Aggregates (Building materials)) (Separators (Machines))

STABIN, I. P.; SHIRMAN, V. G.

Problems of dressing rock, gravel and sand in heavy mediums. Biul. tekh. inform. Inst. "Proektgidromekh." no.1:52-58 '62. (MIRA 16:1)

(Aggregates(Building materials))

SHIRMAN, V.G., inzh.; STABIN, I.P., inzh.

Industrial practice of enriching rubble in heavy media.
Stroi. mat. 10 no.5:22-26 My '64. (MIRA 17:9)

USSR/Radio, Frequency Modulation Oct/Nov 1946
Spectra, Radio Frequency

"Frequency Spectra in Pulse Time and Pulse Frequency Modulation," Ya. D. Shirman, Engr, 25 pp

"Radiotekhnika" Vol I, No 7/8

The concepts of modulation of the first and second kind are introduced for phase and frequency pulse modulation as well as for one-side duration modulation of the impulses. For each of the cases considered, the problem relating to the frequency spectrum due to modulation by a sine-wave signal is solved. Based on the simple ultimate results, the distortions arising with reception performed by the filtered spectrum method are examined and computation formulae and graphs for choosing modulation parameters given.

20T55

SHIRMAN, YA. D.

9(1) PHASE I BOOK EXPLOITATION SOV/1957

Shirman, Yakov Davidovich

Radiovolnovody i ob"yemnyye rezonatory (Radio Waveguides and Cavity Resonators) Moscow, Svyaz'izdat, 1959. 378 p. Errata slip inserted. 10,000 copies printed.

Resp. Ed.: M.V. Persikov; Ed.: Ye. S. Novikova; Tech. Ed.: S.F. Karabilova.

PURPOSE: The book may be useful to engineers engaged in the designing of waveguides.

COVERAGE: The material of this book is based on lectures delivered by the author to students taking a course in the fundamentals of radio engineering. The first seven chapters deal with the theory and physical processes of waveguides and cavity resonators. Chapters 8 and 9 explain the theory of the excitation of waveguides and discuss waveguide irregularities. The final three chapters outline problems in the propagation of electromagnetic waves in

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9.3230

66704
SOV/109-4-8-24/35

AUTHORS: Shirman, Ya.D. and Vaynoris, Z.A.

TITLE: A System of Anisotropically Conducting Planes as the Simplest Model of the Delay Lines with Distributed Parameters

PERIODICAL: Radiotekhnika i elektronika, 1959, Vol 4, Nr 8, pp 1368 - 1376 (USSR)

ABSTRACT: Two delay lines with distributed parameters are shown in Figure 1; one of these, in Figure 1a, is cylindrical, while the other is rectangular or flat (see Figure 1б). Each line comprises a winding in the form of a helix and an anisotropically conducting screen. In order to obtain long delays and small losses, it is necessary that the screen should have no conductance in the direction of the turns of the helix. This property can be taken into account in the design of a delay line by employing a simple model consisting of four anisotropically conducting planes, situated in a homogeneous isotropic dielectric (see Figure 2a). This model is not the only possible one; in fact, a simpler model such as shown in Figure 2б can be devised. The analysis of the

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A System of Anisotropically Conducting Planes as the Simplest Model of the Delay Lines with Distributed Parameters

plane systems shown in Figures 2 is of some interest apart from its applicability to the design of the delay lines. First, the system of Figure 2a is considered and the coordinate system employed is that indicated in the figure. It is shown that the dispersion equation for the system is:

$$\varphi(k) = \frac{1}{2\pi} kv_o tg\, \alpha\, e^{-\frac{ka}{2}} \sqrt{\frac{sh\, kb}{shk(a+b)}} = f \qquad (27)$$

where v_o is the velocity of light in the dielectric, k is given by Eq (2) and v_φ is the phase velocity of the delayed wave. For the system of Figure 2b, Eq (27) is simplified and written as Eq (28). Two graphs of Eq (27), as a function of k, are shown in Figure 3.

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A System of Anisotropically Conducting Planes as the Simplest Model of the Delay Lines with Distributed Parameters

From these, it is possible to determine k for a particular frequency. The phase velocity is then evaluated from Eq (29) and the delay is found from Eq (30). On the basis of the curves of Figure 3, it was possible to construct the delay curves as a function of frequency; these are shown in Figure 4. For the case of very low frequencies, the dispersion equation is simplified and can be written as Eq (31), while the delay is expressed by Eq (34). For the intermediate frequencies, Eq (27) can be written as Eq (32), while the delay is expressed by Eq (35). On the other hand, for the very high frequencies, the dispersion equation is written as Eq (33) and the delay is expressed by Eq (36). From these equations, it is found that at very low frequencies, the delay of a system of four anisotropically conducting planes is a maximum; the value of the delay can be very high (as much as 1 000). In the region of very high frequencies, the delay is independent of the dimensions a and b and is determined only by the angle α. In the intermediate-frequency region, the

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SOV/109-4-8-24/35

A System of Anisotropically Conducting Planes as the Simplest Model of the Delay Lines with Distributed Parameters

delay is inversely proportional to $f^{-1/3}$ and is independent of a. The shape of the delay curves, as a function of frequency, can be explained by considering the structure of the electromagnetic field in the delay system. Curves representing the field distribution are indicated in Figures 6 and 7. There are 7 figures and 2 references, 1 of which is English and 1 Soviet; the Soviet reference is translated from English.

SUBMITTED: May 26, 1958

Card 4/4

Fourier-harmonics, for discrete frequencies $f_m = \frac{m}{T}$ ($m = m_1, m_1 + 1, \ldots, m_2$). Solving for the coefficients, the author obtains

$$a_m(x) = \sum_{i=1}^{s} \left[a_{mi}(0) \cos 2\pi \frac{f_m \cos \alpha_i}{c} x - b_{mi}(0) \sin 2\pi \frac{f_m \cos \alpha_i}{c} x \right],$$
$$b_m(x) = \sum_{i=1}^{s} \left[a_{mi}(0) \sin 2\pi \frac{f_m \cos \alpha_i}{c} x + b_{mi}(0) \sin 2\pi \frac{f_m \cos \alpha_i}{c} x \right]. \quad (4)$$

which gives a discrete frequency spectrum for coordinate x, from 0 to f_m/c. α_i-angle between the x positive direction and the i-th incoming wave; c - velocity of light. The probability of various u(t, x) can be described by the joint distribution of the coefficient, each being a Gaussian. As thermal radiation is uncorrelated in frequency, we can take the covariants with a different number of harmonics as identically zero. Multiplying coefficients and averaging

Card 2/6

$$\overline{a_{mn} a_{m\nu}} = \overline{b_{mn} b_{m\nu}} = \frac{N_0}{T} \frac{\sin \pi (n-\nu)}{\pi (n-\nu)}. \qquad (12)$$

is obtained, where $a_{mn} = a_m(x_{mn})$; $b_{mn} = b_m(x_{mn})$, and $x_{mn} = n/2\ c/f_m$. Hence, we see that these coefficients are independent incidental quantities, with a dispersion N_0/T and a mean value of zero. Their joint probability distribution may be represented in the form:

$$p(\ldots, a_{mn}, b_{mn}, \ldots) = \left(\frac{T}{2\pi N_0}\right)^{0.5\nu} e^{-\frac{1}{N_0}\left[\left(a_{mn}\sqrt{\frac{T}{2}}\right)^2 + \left(b_{mn}\sqrt{\frac{T}{2}}\right)^2\right]}, \qquad (13)$$

and the following parameters are considered

$$a_{mn}\sqrt{\frac{T}{2}} \quad \text{и} \quad b_{mn}\sqrt{\frac{T}{2}} \qquad (14)$$

of the arbitrary function u(t, x) as coordinates u_k (k = 1, 2, ...)

Card 3/6

of a certain multidimensional vector $\bar{u}$. If the spectrum of the signal is concentrated around frequency $f_0 = c/\lambda_0$, then after certain operations the author obtains finally

$$\overrightarrow{u\,v} = \frac{2}{\lambda_0}\int_{-l/2}^{l/2} dx \int_{-\infty}^{\infty} u(t, x)\, v(t, x)\, dt = \frac{1}{\lambda_0}\,\mathrm{Re}\int_{-l/2}^{l/2} dx \int_{-\infty}^{\infty} \dot{U}(t, x)\, \dot{V}^{*}(t, x)\, dx. \qquad (20)$$

In paper (1) a coefficient of utilization of energy was introduced. When applied to the present problem, it becomes:

$$k = \frac{\overrightarrow{u_{m+1}}\,\overrightarrow{r_{m+1}}}{\overrightarrow{u^2_{m+1}}} = \frac{\iint \dot{U}_{m+1}(t, x)\, \dot{R}^{*}_{m+1}(t, x)\, dt\, dx}{\iint |\dot{U}_{m+1}(t, x)|^2\, dt\, dx}. \qquad (21)$$

where $\dot{R}_{m+1}(t, x)$ is determined from a recurrent given relationship. In the case, when two signals are resolved and the noise level is low, compared with the disturbing signal $k \simeq 1 - \rho$ (26), where ρ - "correlation" coefficient of the signals to be resolved:

Card 4/6

Statistical analysis of ...

$$\rho = \frac{\left|\iint \dot{U}_1(t, x)\, \dot{U}_2^*(t, x)\, dt\, dx\right|^2}{\iint |\dot{U}_1(t, x)|^2\, dt\, dx \iint |\dot{U}_2(t, x)|^2\, dt\, dx}, \qquad (27)$$

Taking a concrete example of two radar signals, which differ significantly in their angle of incidence only: $\Delta\alpha = \alpha_2 - \alpha_1$ then

$$k \simeq \frac{1}{3}\left(\frac{\pi\Delta\alpha}{\alpha_0}\right)^2. \qquad (35)$$

where $\alpha_0 = \lambda_0/l \sin\alpha$ [$\alpha = (\alpha_1 + \alpha_2)/2$]. This result means that the presence of one radiator does not interfere with the correct resolution of the second one, if the signal has an energy reserve of the signal = 1/k. For $\Delta\alpha/\alpha_0 = 0.2$, $1/k \simeq 7.5$. When the position of the disturbing radiators is unknown, the author finds for the

Card 5/6

Statistical analysis of ...

optimum characteristics of direction:

$$\psi(\alpha) = \frac{\sin\left[\frac{\pi l}{\lambda_0}(\cos\alpha - \cos\alpha_0)\right]}{\frac{\pi l}{\lambda_0}(\cos\alpha - \cos\alpha_0)},$$

which is the same as in the absence of disturbing radiators. These results can be extended to all cases, for which the Kotel'nikov's theorem holds. There are 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc.

SUBMITTED: September 24, 1960

Card 6/6

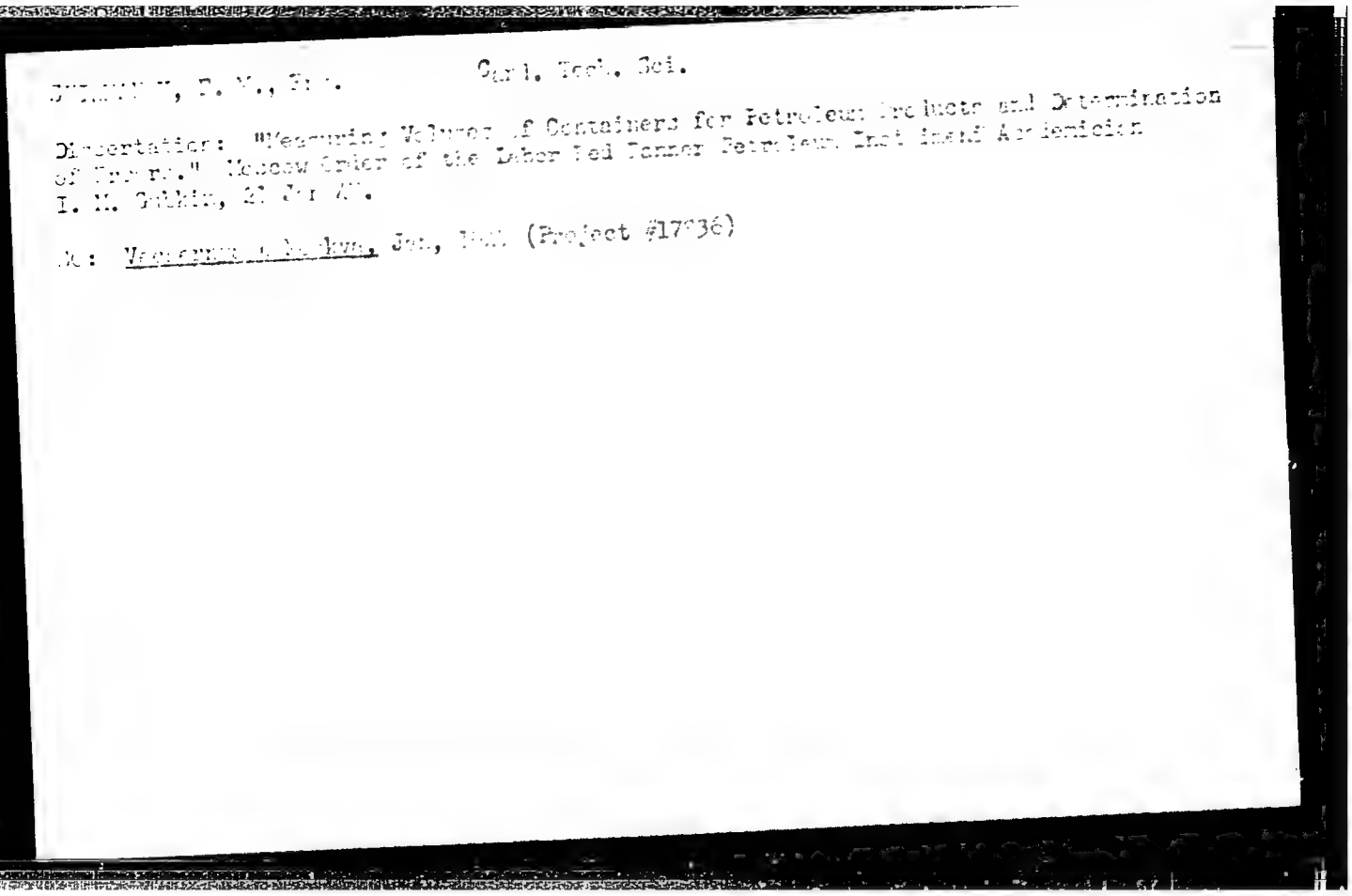
1. SHTRMANOV, A. G. Eng.

2. U. S. R (600)

4. Spillways

7. Expanded fields of a practical utilization of spillway dams. Gidr. stroi. 21 no. 9,52.

9. Monthly List of Russian Accessions, Library of Congress, January, 1953. Unclassified.



Gas'l. Tech. Sci.

[illegible], P. V., Etc.

Dissertation: "Measuring Volumes of Containers for Petroleum Products and Determination of Errors." Moscow Order of the Labor Red Banner Petroleum Inst imeni Academician I. M. Gubkin, 21 Jun 47.

SO: Vechernyaya Moskva, Jan, 1948. (Project #17836)

PHASE I BOOK EXPLOITATION SOV/3891

Moscow. Nauchno-issledovatel'skiy institut vesov i priborov

Vesoizmeritel'nyye pribory i ispytatel'nyye mashiny; teoriya i raschet, [vyp. 1] (Load-Measuring Devices and Testing Machinery; Theory and Design, [no. 1]) Moscow, Mashgiz, 1959. 178 p. 3,600 copies printed.

Sponsoring Agency: RSFSR. Moskovskiy ekonomicheskiy rayon. Sovet narodnogo khozyaystva.

Ed.: N.A. Mironov, Engineer; Ed. of Publishing House: L.G. Prokof'yeva; Tech. Eds: Z.I. Chernova and V.D. El'kind; Managing Ed. for Literature on Machine and Instrument Construction (Mashgiz): N.V. Pokrovskiy, Engineer.

PURPOSE: This collection of articles is intended for scientific workers and technical personnel specializing in weighing devices, instrument construction, and related fields. It may also be useful to students of schools of higher technical education.

Card 1/ 3

AVAILABLE: Library of Congress

Card 3/3

VL/pw/gmp
8-25-60

SHIRMANOV, PETR [illegible]OVICH

Ustoichivost' puti izolirovannogo kryla (TSAGI. Trudy, 1928, no.36, P.5-10, tables, diagrs.)

Title tr.: Yawing moment of an isolated wing.

QA911.M65 no.36

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

SHIRMANOV, PETR MAKSIMOVICH

Krugovaia obduv'ka kryl'ev. (TSAGI, Trudy 1928, no.36, p.11-35, tables, diagrs)

Title tr.: Testing airfoils at angles of incidence from 0° to 360°.

QA911.M65 no.36

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress 1955

SHISHMAN, PETR [illegible]OVICH, and V.P. GORSKII.

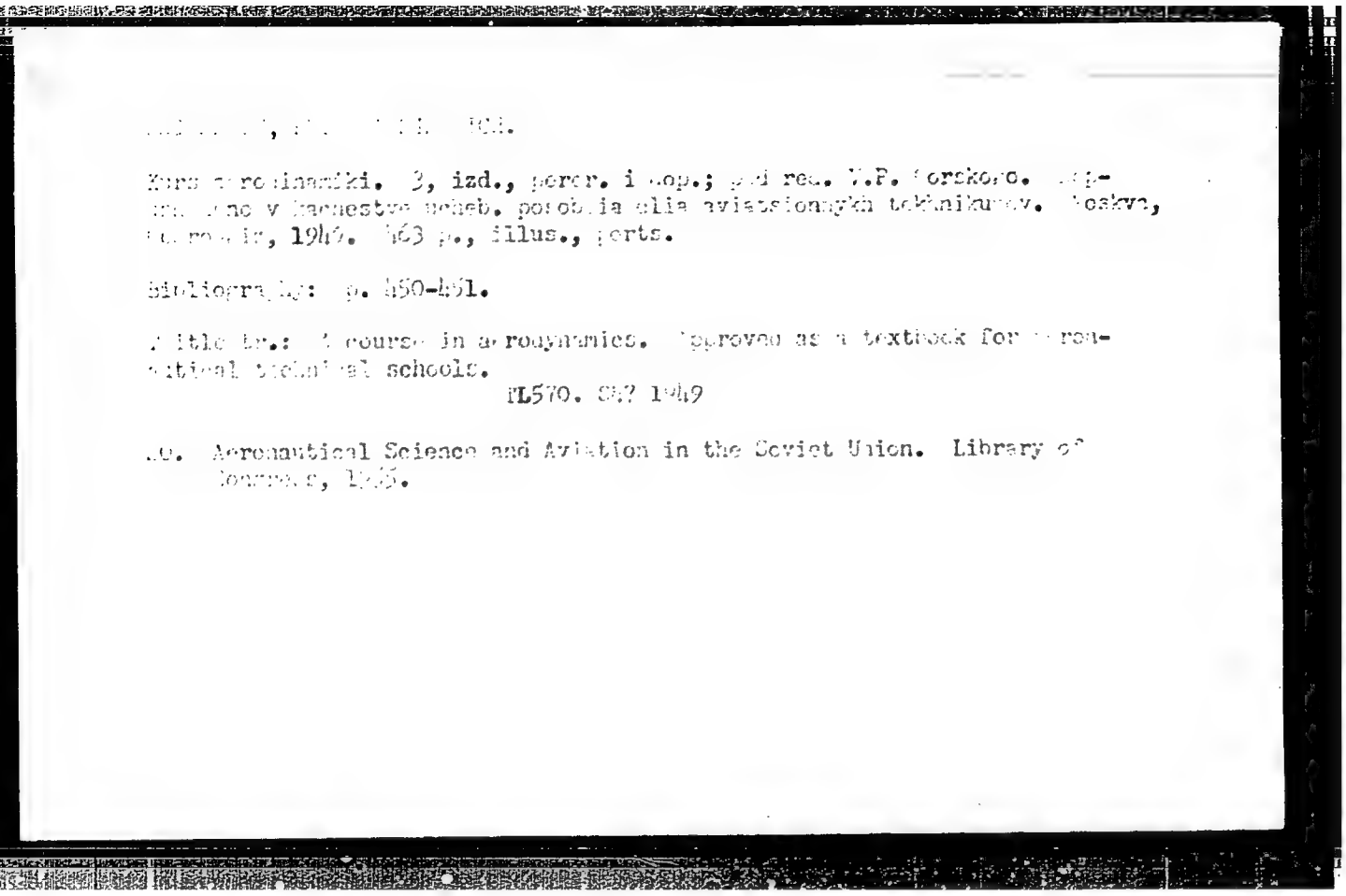
Atlas aerodinamicheskikh kharakteristik aviatsionnykh profelei. Moskva, Gosaviaavtoizdat, 1932. 401 p., 1 l., incl. illus., tables, diagrs. (1 fold.)

Bibliography: leaf at end.

Title tr.: Atlas of aerodynamic characteristics of airfoils.

TL574.A4S52

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955



[illegible], [illegible] 1949.

Kurs aerodinamiki. 2, izd., perer. i dop.; pod red. V.P. Vorob'eva. Utverzhden v kachestve uchebn. posobiia dlia aviatsionnykh tekhnikumov. Moskva, Oborongiz, 1949. 463 p., illus., charts.

Bibliography: p. 450-451.

Title tr.: A course in aerodynamics. Approved as a textbook for aeronautical technical schools.

TL570. S87 1949

DLC. Aeronautical Science and Aviation in the Soviet Union. Library of Congress, 1955.

SHIRMANOV, P. K.

"Rational Types of Towers for Wind Mills." Sub 19 Dec 51, Moscow Technological Inst of the Food Industry, Ministry of Higher Education USSR

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

SHIRMANOV, P.M., starshiy prepodavatel'.

Most efficient types of windmill towers. Trudy MTIPP 2:431-448 '52. (Windmills) (MIRA 9:2)

TASHKINOV, A. (Perm'); KNYAZEV, V.; SYCHEV, B., shofer; TELITSYN, A., shofer; SHIRMANOV, Yu., shofer; GORSHKOV, G., shofer; FEDOTOV, G. (Penza); RYBIN, N. (Krasnodarskiy kray); ZYRYANOV, T., bukhgalter pozharnoy chasti (Kamensk-Ural'skiy, Sverdlovskaya obl.); KRIVOSHAPOV, I. (Sverdlovsk); VOLODIN, V. (Rostov-na-Donu)

Readers' letters. Pozh.delo 8 no.8:30 Ag '62. (MIRA 15:8)

1. Nachal'nik dobrovol'noy pozharnoy druzhiny kolkhoza "Rossiya", Kalininskaya obl. (for Knyazev). 2. Bol'shaya-Murashkinskaya rayonnaya pozharnaya komanda Gor'kovskoy oblasti (for Sychev, Telitsyn, Shirmanov, Gorshkov).
(Fire prevention)

L 5791-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM

ACCESSION NR: AP5014138 UR/0079/64/034/012/3950/3952

AUTHOR: Imayev, M. G.; Shakirova, A. M.; Shirmanova, Ye. P.; Kas'yanova, Ye. K.

TITLE: Organophosphorus compounds with an active methylene group. I --synthesis of dialkyl omega-ketophosphinic acids

SOURCE: Zhurnal obshchey khimii, v. 34, no. 12, 1964, 3950-3952

TOPIC TAGS: phosphinic acid, ester, organic synthetic process

ABSTRACT: The reaction of trialkyl phosphite with omega-bromoacetophenone was used to synthesize seven dialkylphosphoneacetophenones, not described in the literature: dimethyl-, di-n-propyl-, di-n-butyl-, di-n-hexyl-, di-n-heptyl-, and di-n-octylphosphoneacetophenones. The dialkylphosphoneacetophenones obtained reacted vigorously with alkali, and gave characteristic color with ferric chloride in alcohol solution. The products were colorless liquids with a sharp odor, readily soluble in organic solvents. Data are cited on the physical properties of the new products: boiling points, specific gravities, refractive indices, molecular refractions. Orig. art. has 2 tables.

Card 1/2

L 52793-65
ACCESSION NR: AP5016188

ASSOCIATION: Bashkirskiy gosudarstvennyy universitet (Bashkir State University)

SUBMITTED: 28Sep63 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 011 OTHER: 001 JPRS

Card 2/2

SHIRMAZAN, M. G.

"Direction and Maximum Values of Hybrid Functions." Sub 9 Apr 51, Order of the Labor Red Banner Sci Res Physicochemical inst imeni L. Ya. Karpov.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

CA

6

Hybrid orbits for the coördination numbers 7 and 9. M. G. Shumanin and M. E. Dyatkina. *Doklady Akad. Nauk S.S.S.R.* 77, 75–6(1951).—Of the two known configurations with a coördination no. 7, the configuration of ZrF_7^{--}, an octahedron with one extra atom in the center of a face, symmetry C_{3v}, can arise through the hybridizations d^2sp^3 and d^3p; the type TaF_7^{--}, a triangular prism with one extra atom in the center of a square face, symmetry C_{4v}, can arise through the hybridizations d^3p^3, d^4p^3, and d^5p^3. Two new configurations are calcd. by the method of Kimball (*C.A.* 34, 1524[1]), by group-theoretical calcn. of the irreducible representations based on the at. orbits s, p, d, f, and then on the valence σ-orbits. A configuration with the coördination no. 7, with the σ-bonds directed towards the corners of a pentagonal bipyramid, symmetry D_{5h}, can arise through the hybridizations sp^4d^2, sp^4df^2, sp^4f^2, sp^4df^2, spd^4f^2, $spdf^4$, sd^4f^2, sdf^4; of these only one does not involve f electrons. A configuration with the coördination no. 9, a trigonal prism with 3 extra atoms over the centers of the rectangular faces, symmetry D_{3h}, can arise through the hybridizations sp^4d^4, $sp^4d^3f^2$, sp^4df^3, spd^5f^2, spd^4f^3, sp^4f^4, $sp^4d^3f^2$, sp^4df^3, sp^4f^4, sdf^5, sp^3f^5, $sp^4d^3f^2$, spd^4f^3, $spdf^5$, sp^4df^3, sp^4f^4, $sp^4d^3f^2$, sp^4df^3, sp^4f^4, sdf^5, sdf^5, spd^4f^3, p^4df^3, p^4f^4, $p^4d^3f^2$, p^4df^3, p^4f^4, pdf^5, d^4f^3. N. Thon

SHIRMAZAN M. G.

23817

USSR/Chemistry - Valency Feb 52

"Valence Direction of Valency Bonds for Coordination Numbers Six and Eight," M. G. Shirmazan and M. Ye. Dyatkina, Physicochemi Inst imeni L. Ya. Karpov

"DAN SSSR" Vol 82, No 5, pp 755, 756

Arrangement of bonds having symmetry of C_{3v} cannot occur without the participation of f-electrons. Since the Ta atom lacks f-electrons, it is not likely that it has the TaF_8^{3} structure indicated in the literature. Presented by Acad A. N. Frumkin 13 Dec 51

23817

USSR/Chemistry - Valency — Apr 53

"Directed Valency With Participation of f-Electrons," M. G. Shirmazan, M. Ye. Dyatkina, Phys-Chem Inst im L. Ya. Karpov, Moscow

Zhur Fiz Khim, Vol 27, No 4, pp 491-494

Found the directions in which there is maximum concn of the electron cloud. Detd max values of f-functions and carried out series expansions of f-functions to obtain irreducible representations of different symmetry groups. Found the directed valencies in which s,p,d, and f electrons participate for 22 different dispositions of σ - bonds at coordination numbers 2-9.

270T18

SHIRMAZAN, M. G.

USSR/Chemistry - Isotopes 21 Jun 53

"Equivalence of Bonds in Quaternary Ammonium Compounds," L. M. Nazarova, M. G. Shirmazan and Ya. K. Syrkin, Corr Mem Acad of Sci USSR

DAN SSSR, Vol 90, No 6, pp 1045, 1046

Checked the equivalence of the N atom using radioactive C^{14}. Found that all four of the N-C bonds are equivalent by decompg $(CH_3)_4NI$ into $(CH_3)_3N$ and CH_3I. The CH_3I had one fourth of the activity of initial $(CH_3)_4NI$. Also decompd tri-methyl-phenyl-ammonium iodide into $C_6H_5N(CH_3)_2$ and CH_3I. The CH_3I then had one third of the activity of the original compd.

269T4

SHIRMAZAN, M.G.; DYATKINA, M.Ye.

New hybridization for the coordination number 9 and structure of tricyclopentadienyluranium. Zhur. neorg. khim. 2 no.8:1761-1762 Ag '57. (MIRA 11:3)

(Stereochemistry) (Uranium compounds)

AUTHORS: Chirmanan, M. G., Dyatkina, M. Ye. SOV/62-58-7-19/26

TITLE: On the Problem Concerning the Structure of the $Mo(CN)_8^{4-}$ Ion (K voprosu o stroyenii iona $Mo(CN)_8^{4-}$)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1958, Nr 7, pp. 898-899 (USSR)

ABSTRACT: In one of the previous papers (Ref 1) the authors discussed already the maximum values (znacheniya) of the functions (as well as the angles between the directions of the maximum values) calculated for hybrid atomic orbits in the case of coordination numbers of 2 - 9, among them also for the coordination number 8. It was shown that in the hybridization of d^4sp^3 electrons 8 hybrid orbits of great maximum values (symmetry D_{2d}) can develop, which would correspond to a configuration exhibited by the $Mo(CN)_8^{4-}$ ion. Dyukyulo (Ref 2) deals with the same problem, however, he concludes that in the hybridization of the d^4sp^3 electrons only relatively weak bonds can be formed. According to the opinion of the authors Dyukyulo arrived at that conclusion because of the method employed by him (composition of hybrid orbits). In

Card 1/2

5(4) SOV/62-59-9-7/40

AUTHORS: Shirmazan, M. G., Dyatkina, M. Ye.

TITLE: Studies of Directed Valences. Report 1. Direction and Maximum Value of Hybrid Orbitals for the Coordination Numbers 2, 3, 4

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 9, pp 1553-1561 (USSR)

ABSTRACT: In the present paper an expression is found for the analytical calculation of the hybrid orbitals with the coordination numbers 2, 3 and 4 and for the symmetries C_{2v}, $D_{\infty h}$, C_{3v}, T_d, C_{4v}, and D_{4h}. On the basis of these analytical expressions it is possible to determine the direction of the maximum concentration and the maximum value of the hybrid orbitals. From the sum of the maximum values of these functions the question of the possible existence of this or another symmetry can be solved. The angle between the directions of maximum concentration was determined for the symmetries from the various possible values of the valency angle. The symmetries are represented on the figures and the tables list the values of the angles. There are 10 figures, 10 tables, and 5 references, 4 of which are Soviet.

Card 1/2

SOV/62-59-9-7/40

Studies of Directed Valences. Report 1. Direction and Maximum Value of Hybrid Orbitals for the Coordination Numbers 2, 3, 4

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences, USSR)

SUBMITTED: December 30, 1957

Card 2/2

SHIRMUKHAMEDOV, A.

A few words about landslides in the Sangardak Valley. Izv.Uzb. fil.Geog.ob-va 4:109 '60. (MIRA 13:7)
(Sangardak Valley--Landslides)

KULAKOV, V.N.; VARFOLOMEYEV, D.F.; BONDARENKO, M.F.; KOTOVA, V.N.; AKHMETOV, I.G.; KOLYCHEV, V.M.; NOSAL', G.I.; KIVA, V.N.; PANKRATOVA, M.F.; KRUGLOV, E.A.; SHMELEV, A.S.; SHABALIN, I.I.; SHIRMUKHAMETOV, O.A.; IVYANOV, I.Ya.; RATOVSKAYA, A.A.; VAYSBERG, K.M.

Technology of the production of naphthalene from the refining products of eastern oils. Nefteper. i neftekhim. no. 4:30-33 '64. (MIRA 17:5)

1. Nauchno-issledovatel'skiy institut neftekhimicheskikh proizvodstv i ordena Lenina Ufimskiy neftepererabatyvayushchiy zavod.

[illegible] SOV

[illegible] AP5015466 UR/0318/64/000/010/0041/0044

[illegible] Sharipov, A.Kh.; Shirmukhametov, O.A.; Isyanov, I.Ya.

[illegible] Economic method of derivatives of phthalic anhydride from neutral petroleum [illegible]

[illegible] Neftepererabotka i neftekhimiya, no. 10, 1964, 41-44

[illegible] petroleum refining, naphthalene

Abstract: Results of investigations conducted to determine an economic method of preparation of phthalic anhydride are reported. Petroleum fractions were subjected to hydrodealkylation, to give a reaction mass containing [illegible] the main source of phthalic anhydride. Other light hydrocarbons [illegible] obtained. Pure naphthalene isolated by distillation or crystallization is expensive and is accompanied by a considerable loss of the final product. It has been found that it is considerably more economical to isolate from the reaction mixture a broad fraction containing about 95 percent naphthalene. [illegible] that the method of obtaining phthalic anhydride from naphthalene in [illegible] is less expensive than that used to obtain the anhydride from

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ACCESSION NR: AP5015466

pure naphthalene. It was further established that the cost of the preparation of phthalic anhydride increases if the fraction used contains less than 95 percent of naphthalene.

[illegible] art. has 1 figure and 3 tables.

ASSOCIATION: Ufimskiy nauchno-issledovatel'skiy institut neftekhimicheskikh produktov (Ufa Scientific-Research Institute of Petrol-Chemical Products)

SUBMITTED: 00 ENCL: 00 SUB CODE: FP

NO REF SOV: 015 OTHER: 003 JPRS

Card 2/2

SHERMUKHAMEDOV, T.N.

Fractures of the astragalus in childhood. Ortop., travm. i protez. 26 no.3:31-35 Mr '65. (MIRA 18:7)

1. Iz kliniki travmatologii detskogo vozrasta (zav. - kand. med. nauk N.G.Dam'ye) TSentral'nogo instituta travmatologii i ortopedii (dir. - chlen-korrespondent AMN SSSR prof.M.V.Volkov). Adres avtora: Moskva A-299, ul. Priorova, d.10, TSentral'nyy institut travmatologii i ortopedii.

ALAMPIYEV, P.M.; APENCHENKO, V.S.; BEKOVA, T.N.; BYUSHGENS, L.M.; GINZBURG, G.Z.; GORDONOV, L.Sh.; GRIGOR'YEV, A.A., akademik; GURARI, Ye.L.; DANILOV, A.D.; DEMIN, L.A.; DOBROV, A.S.; [redacted]; KULAGIN, G.D.; MILEYKOVSKIY, A.G.; MURZAYEV, E.M.; PAVLOV, V.V.; POPOV, K.M.; YANITSKIY, N.F.

Lev IAkovlevich Ziman, 1900-1956; obituary. Izv. AN SSSR.Ser.geog. no.6:153-154 N-D '56. (MLRA 10:1)
(Ziman, Lev IAkovlevich, 1900-1956)

KLYUCHEROV, A.P.; KONDRAT'YEV, S.N.; Prinimali uchastiye: GUSAROV, F.V.; UDOVENKO, V.G.; PETROV, G.A.; BURKSER, V.Ye.; SHMONIN, I.A.; KUDRIN, Ye.A.; GALAKHMATOV, S.N.; ZIMINA, L.P.; SHISHARIN, B.N.; KONDYURINA, R.V.; BURMISTROV, K.A.; SHIRNIN, I.A.; SIMONENKO, F.N.; GORSHILOV, Yu.V.; KOLPAKOV, B.V.; GUSAROV, A.K.; BOLOTOV, P.G.

Heat insulation of open-hearth furnace crowns. Metallurg 5 no.11: 14-17 N '60. (MIRA 13:10)

1. Nizhe-Tagil'skiy metallurgicheskiy kombinat.
(Open-hearth furnaces--Design and construction)
(Insulation (Heat))

KONDRAT'YEV, S.N.; KLYUCHEROV, A.P.; UDOVENKO, V.G.; SHIRNIN, I.A.; VYDRINA, Zh.A.

Rapid methods of repair and the fritting of new hearth bottoms. Metallurg 6 no.9:10-13 S '61. (MIRA 14:9)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat.
(Open-hearth furnaces--Maintenance and repair)

VYDRINA, Zh.A.; KONDRAT'YEV, S.N.; ABDULINA, M.A.; SIMONENKO, F.N.; AKSEL'ROD, L.M.; SHIRNIN, I.A.

Efficiency of using finely milled powders for repairing and fritting hearth bottoms of open-hearth furnaces. Stal' 24 no.11:989-991 N '64. (MIRA 18:1)

NESTEROV, V.S., prof.; SHIRNINA, N.V.

Treatment of patients with angina pectoris with nicotinic acid and sex hormones. Sov.med. 23 no.9:19-23 S '59. (MIRA 13:1)

1. Iz gospital'noy terapevticheskoy kliniki Voronezhskogo meditsinskogo instituta.
(ANGINA PECTORIS ther.)
(NICOTINIC ACID ther.)
(SEX HORMONES ther.)

SHIRNINA, N.V.; STRONKOVSKIY, V.P.

Effect of sex hormones and vitamin E on the serum cholesterol level in patients with atherosclerosis. Terap.arkh. 33 no.1: 26-29 '61. (MIRA 14:3)

1. Iz kafedry gospital'noy terapii (zav. - prof. V.S. Nesterov) Voronezhskogo meditsinskogo instituta.
(ARTERIOSCLEROSIS) (VITAMINS--E) (TESTOSTERONE) (CHOLESTEROL)